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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,546	04/11/2001	Ralph A. Mosher	D/A0584	4763

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Patent Documentation Center  
Xerox Corporation  
Xerox Square 20th Floor  
100 Clinton Ave. S.  
Rochester, NY 14644

EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 02/12/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.		Applicant(s)	
	09/833,546		MOSHER ET AL.	
	Examiner	Art Unit		
	Tamra L. Dicus	1774		

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
    1. ☐ Certified copies of the priority documents have been received.  
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

Objections to the specification are withdrawn. The rejection under 35 U.S.C. 112, second paragraph is withdrawn. The rejection under 35 U.S.C. 102(b) is withdrawn.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-16, 18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,721,032 to Parker et al. in view of USPN 6096470 to Fuller and further in view of USPN 5,663,283 to Sakakibara et al. and *Handbook of Thermoset Plastics* (2nd Edition) ©1998.

Parker teaches an endless seamed flexible intermediate belt comprising a first and second end, where each comprises plural mutually mating elements, joined in an interlocking relationship, forming a seam. **See col. 8, lines 20-60.** The belt comprises a substrate of a polyimide, polyamide, or polycarbonate and the seam comprises an adhesive comprising a polyamide strip. See col. 2, lines 25-30, col. 5, lines 11-20, and col. 9, lines 20-38. The plurality of mutually mating elements are in the form of a puzzle cut pattern, which further comprise a first projection and second receptacle which are curved, forming a joint between first and second

ends. See Figures 1-11, col. 5, lines 45-65. Parker teaches the volume resistivity of  $10^8$  to  $10^{11}$  ohms-cm at col. 5, lines 24-27.

Parker does not explicitly state the adhesive polyamide further comprising an alcohol soluble polyamide, consisting of methoxy or methylene methoxy groups, an electrically conductive filler such as a quaternary ammonium salt, having metal oxides such as titanium dioxide aluminium oxide, or carbon fillers such as carbon black or fluorinated carbon, or a polymer filler such as polypyrrole, or charge transporting molecules such as bis(dihydroxy diethylamino) triphenyl methane, or dihydroxy tetraphenyl biphenylene diamine, or a crosslinker such as oxalic acid, or the structure of claims 2-6. However, Fuller discloses it is known in the art to use the aforementioned alcohol soluble polyamide adhesive additives for producing flexible electrophotographic imaging members such as an endless belt at col. 7, lines 1-15, 49-67, col. 8, lines 1-17, 50-65, col. 9, lines 1-35, col. 16, lines 50-53, col. 19, lines 39-50, col. 20, lines 20-25. Fuller further details the polyamide structure of claims 2-5 at col. 15, especially lines 55-68 and col. 16, lines 1-2. With regard to the n number, the same consistency (solid) is produced, and  $n = 50$  to  $1000$  is equivalent to  $x = \text{an integer}$ . While Fuller does not show the R on the N; however, Fuller does teach the R can be substituted on the N in order to crosslink, as taught at col. 15, line 31. Parker and Fuller are analogous art because both references are in the same field of endeavor, such as electrophotography teaching endless belts. Hence, it would have been obvious to one of ordinary skill in the art to modify the endless belt of Parker to include the adhesive composition of Fuller to produce an improved belt having properties such as a longer wear life as taught by Fuller at col. 5, line 67, and col. 6, lines 1-50 and to substitute the R on the N as taught by Fuller in order to crosslink at col. 15, line 31.

Parker does not teach a substrate of polyaniline polyimide. However, Sakakibara teaches it is known to use polyaniline with electrically conductive fillers and the same adhesive additives above to produce electrically conductive supports for electrophotographic members at col. 6, lines 20-64. Moreover, pg. 426 of the Handbook of Thermoset Plastics by Landis et al. states it is known to blend polyaniline with polyimides, useful as coats or conductive composites to serve two roles of loadbearing and electrical current dispersal. Therefore, it would have been obvious to one of ordinary skill in the art to modify the belt of Parker to include polyaniline polyimide on a substrate as used by Sakakibara and further taught by Landis to improve conductivity of a substrate. The examiner has established a *prima facie* case of obviousness and has provided evidentiary support thereof for the rejection under 35 U.S.C. 103(a).

### ***Response to Arguments***

In regards to applicant's request that the restriction requirement be withdrawn, the Examiner denies the request. Specifically claim 26 is in fact different as Applicant suggests, and the reason being since claim 26 is to an apparatus and comprises such particular components such as: a charge-retentive surface and a development component, which makes this claim distinct and independent from rest of the claims. Hence, the restriction requirement is maintained and made FINAL.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant alleges both Parker

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and Fuller the use of an alcohol-soluble polyamide as an adhesive, and the use of such adhesive to seam two ends of a belt together. Applicant further alleges that Fuller does not teach or suggest binding two ends of a film together. Applicant contends that there must be motivation for Parker to provide an *alcohol soluble* polyamide. The Examiner disagrees. Parker shows polyamide as an adhesive, and in Example 1 states polyamide melting into the seamed area of the belt. Therefore, the alcohol soluble polyamide is taught as added to the interlocking ends. The alcohol soluble polyamide automatically functions as an adhesive. Parker teaches the exact same puzzle cut seam as claimed. Parker does not need to show the polyamide as being alcohol soluble, but since Fuller used as the secondary reference, states alcohol soluble polyamide as adhesive, the motivation to combine is present. Although it is not used to bond the two ends together, it is still analogous art and is obvious to use the adhesive of Fuller as the particular alcohol soluble polyamide since it's features as an adhesive have been shown previously. Parker show polyamide used in the seams and Fuller shows that *alcohol soluble* polyamide as adhesive in belts. See col. 6, lines 50-59, col. 8, lines 4-10, and especially col. 15, lines 33-36. The properties of alcohol-soluble polyamide as so disclosed. Further the term polyamide encompasses many kinds of polyamides including Applicant's alcohol soluble polyamide.

With regards to Applicant's argument that the *Handbook of Thermoset Plastics* and Sakakibara do not teach alcohol soluble polyamide, the aforementioned references were included to show only that polyaniline and polyimide are applicable to any substrate, such as a seam endless belt, to improve conductivity. Fuller teaches alcohol soluble polyamides as adhesive. Applicant's contention that all references do not teach the mutually mating elements relationship of the seamed belt, all the references do not have to as Parker discloses the same orientation of

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the seamed belt. The other references are analogous art and were not included of purpose of showing a seamed belt.

***Conclusion***

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8329 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tamra L. Dicus  
Examiner  
Art Unit 1774

February 9, 2003

COMMUNICATIONS SECTION  
SUPERVISOR  
CYNTHIA KELLY  
FEB 10 2003

